



ANNOUNCEMENT

ARRL Bulletin Nr 56, May 23, 1980:

AMSAT OSCAR Phase III was launched at 1429 UTC on 23 May 1980 aboard a European Space Agency Ariane launch from French Guiana. Initial reports are that immediately after launch, one of four rocket engines suffered reduced thrust. At launch plus 1 minute the guidance system could no longer compensate for the tendency to veer off course and the entire launch vehicle entered a wild tumbling spin. At two minutes after launch ground control began losing telemetry and the Range Safety Officer destroyed the vehicle and with it, Phase III.

Throughout the project, AMSAT met all of its schedules on time. The Phase III spacecraft worked flawlessly to the point at which the mission was terminated. AMSAT has proven again that radio amateurs are capable of working in sophisticated space technology. The Phase III mission was ready. It was in no way responsible for the failure.

As AMSAT reported, "What was lost was hardware, and though that obviously hurt deeply, the design and development skills and knowledge, the systems software and the many hardworking volunteers remain as resources for the future."

ARRL congratulates AMSAT on its performance and we extend our sympathies for the unfortunate loss of the newest member of the satellite family.

Phase III update: The "Firewheel" experiment, Phase III's fellow passenger in the Ariane launch was recovered from the Atlantic Ocean early in June, and two of the four Ariane engines also were recovered later in the month, allowing study of the failed engine. Although the location of Phase III is now known, the condition of the "Firewheel" indicates that no salvageable pieces are likely to be found.

Plans for another Amateur satellite are accelerating. A duplicate Phase III structure is available, along with a full set of solar panels, circuit board art, software and circuit design. Plans cannot be finalized, however, until another launch is ensured, as the design depends on the launch vehicle.

AMSAT's biggest need right now may be for funds, as the treasury is depleted after the completion of Phase III-A. Contributions go to AMSAT, Box 27, Washington, D.C. 20044. □

EVENTS

The annual picnic held jointly with the Middlesex club will be held July 20, with a rain date of August 9. The location will again be the Auburndale Playground, just off Route 128 in Newton (see map, last page). Bring some food and the family around noon and make a day of it. Hope to see you there.

Although with Field Day being behind us as you read this issue, and thus most activities quieting down for the summer, there will be several meetings during the summer. With business at a minimum there should be plenty of time for eye-balls with the other club members. See you there. □

MEETINGS THIS MONTH:

July 24, 1980 at 7:30 pm

August 21, 1980 at 7:30 pm

Intermediate Bldg., Wellesley Hills, Mass.

OFFICIAL BULLETIN

Nr 51, dated May 20, 1980:

FCC has announced it will begin using new Amateur Radio examinations at all Commission offices effective June 1. The new examinations are based on FCC study outlines which appeared in March 1980 QST, pages 55-58. All classes of license, Novice through Amateur Extra, are affected.

Nr 58, dated June 4, 1980:

At its meeting on May 29, 1980, FCC decided in Docket 79-285 to permit standard bandwidth FM, 16F3, from 50.1 to 54 MHz. The League proposed, based on recommendations from the VHF Repeater Advisory Committee and the VHF/UHF Advisory Committee, that standard bandwidth FM be permitted from 51 MHz to 54 MHz. The Commission will carry out its decision by modifying Section 97.65c of the Amateur rules to read "On frequencies below 29.0 MHz, the bandwidth of an F3 emission, frequency or phase modulated, shall not exceed that of an A3 emission having the same audio characteristics". This change becomes effective 30 days from the publication of the report and order, a date which has not yet been determined. In other action, the Commission adopted the text prepared by its staff to discontinue licensing new club, RACES, and military recreation stations. However, those who have club, RACES and military recreation stations can keep them. This confirms the FCC's initial decision in Docket 21135. Details will appear in QST.

Nr 59, dated June 4, 1980:

Beginning July 1, ASCII bulletins will become a regular feature of the W1AW bulletin program. Teletype bulletins are now sent at 0100 0400 and 2200 UTC daily and at 1500 UTC Monday through Friday. At the conclusion of each teletype transmission, the bulletins will be repeated at 110 Baud 170 Hz shift ASCII. Test transmissions on ASCII are presently being conducted and will be continued through the month of June.

Nr 70, dated June 26, 1980:

FCC has proposed a rule change

which, if adopted, would permit Amateur television and facsimile on all Amateur frequencies above 3.775 MHz where voice transmissions are currently allowed. Bandwidth restrictions in section 97.65 of the rules which presently apply to Amateur TV below 225 MHz would also apply to the expanded TV and facsimile privileges below 225 MHz. Comments on this proposal, Docket 80-252, are due September 22, 1980. Reply comments are due October 22, 1980. Details will appear in August 1980 QST. □

CLEARING THE AIR

Many times we have put information into the Spark Gap for members in need of some kind of help, to call another member living near you for possible solution to your problems. We are not sure if this is working or not, as we get no feedback from you members. It would be nice if you would take the time to let the editor K1UR know about it, or any other suggestions that you might like to make. Remember, the Spark Gap is our main link of communicating with our members and we do need your assistance. Thanks in advance.

de Jim Hatherley, WA1TBY □

hr REPORT

FCC's new exams scored an "A" with the first group of applicants who took them. According to instructors from several parts of the country, their students rated the new FCC efforts well written, unambiguous, and closely related to the new FCC study guides. They also liked the practical emphasis on operating procedures in the Technician/General class exams, with more technical subjects covered in the higher class tests. Congratulations to Jay Jackson, AF40, and the other FCC staff members who are responsible for the new exams. Thanks WB6NOA.

hr Report, June 6, 1980 □

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society



EDITOR-IN-CHIEF:

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THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, F.C.C. RULES & REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SENT THEIR ARTICLES (TYPEWRITTEN IF POSSIBLE) TO THE EDITOR-IN-CHIEF OR TO THE CLUB ADDRESS.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS \$8. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181



Minutes

Meeting of May 15, 1980:

The meeting was opened at 8:03 pm by President Bill Downing, WA1PQY.

The minutes of the previous meeting and the treasurer's report were read.

The election of officers of the club for the year 1980/1981 were held (results later in this issue).

The decision not to operate as a club during Operation Sail was repeated along with another request for individuals to help out.

A reminder was also made of the antique auto race May 17.

Members were reminded about the Massachusetts QSO party, May 17-19 and to send in their results as part of the club competition entry.

Field Day and the VHF QSO Party were both discussed.

Initial planning for a flea market the fall has begun. Tentative date is September 6, rain or backup date of September 13.

A motion was made by Dick Paret, WA1ZLQ, and passed, to allocate \$100 of the budget for the VHF QSO Party, and \$50 for Field Day out of the total allocation of \$150 for both events.

The meeting was closed at 9:17 pm.

Meeting of June 5, 1980:

The meeting was opened at 7:51 pm by President Bill Downing, WA1PQY.

The minutes of the previous meeting were read.

A report was made by the president on the repeater meeting held May 29th. As a result of this meeting a proposal had been drawn up to spend a total of \$500 for a new tower, associated hardware, and antenna for the repeater. After discussion, the motion was voted and accepted by the club.

It was announced that the Wellesley College site for Field Day had been approved with the condition that we would not be sleeping at the site.

The treasurer's report was given, and the meeting was closed at 8:27 pm.

Meeting of June 19, 1980:

The meeting was opened at 7:52 pm by President Bill Downing, WA1PQY.

The minutes of the previous meeting and the treasurer's report were given.

A report was given on the results of the VHF QSO Party, which ended up being held on Mt. Wachusett.

Final planning for Field Day was discussed.

Summer meetings were discussed and announced for July 24, August 21, and September 4.

A proposal was made and passed to spend up to \$75 for generator repairs.

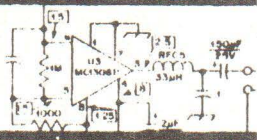
The meeting closed at 8:31 pm. □

NEW CLUB MEMBERS

New members to the club are Laura Hanlon KA1EAQ, Mark Devlin KA1DGO, Phil Temples K9HI, Dave Dodell WB7TPY, Pete Spotts N1ABS, Vincent Dwyer KA1EQ0, and Arthur Swanson (no call). Welcome to the club and don't hesitate to join in on our activities so you can get the most enjoyment from your membership.

de WA1TBY □

Tek Tek



RF Radiation at Hamfest

by Pete Bradley, N1ADX

Recently my wife and I went to the two-day hamfest in St. Louis, Missouri. I was there as a member of the ARRL committee on the biological effects of non-ionizing radiation. The hamfest was very well organized and was held in a large convention center. We first visited the flea market. At each flea market I go to there is something that catches everyone's eye. This time it was a box of 88 mH toroids. After the fourth person told me about them I went and bought some myself. Now I need a use for them!

Someone had built a full-sized model of R2D2 (the robot in the Star Wars movie). It made strange beeping noises and rushed about in the crowds in a random manner. Was it a coincidence that Darth Vader was visiting a department store on the next block?

There were also many impressive demonstrations like the Apple II computer, ATV and microwave equipment. I heard a talk on the problems of malicious interference, while elsewhere someone was teaching material for advanced and extra class exams. I really enjoyed listening to Harry Dannals, W2HD, president of the ARRL. I remember some of the questions which he answered. He was in favor of a larger phone band on 20 meters, and CW only on the new 10 MHz band (but not just for extras). He also wants full Amateur privileges on 160 meters.

The low point of the Saturday meeting was the announcement that the new phase III satellite had failed to make it into orbit. The sad news was carried around the convention center by 2 meters.

On Sunday morning the ARRL committee on the biological effects on non-ionizing radiation presented information of interest to the Amateur community. There is a possibility that new federal standards for radiated power

levels will be published in the near future. However, with the intermittent operation and relatively low power of Amateur stations we should be well within the federal limits. Unfortunately, lawmakers in some local communities have tried to propose restrictive standards as part of their health codes. This seems to be due to a general misunderstanding about the nature of the stuff that comes out of antennas. The non-ionizing radiation from a radio transmitter is not the same as the ionizing radiation from Three Mile Island. So let us set the record straight, and please help to spread the word.

Ionizing radiation (nuclear reactors and atomic bombs) is dangerous stuff because it is made of particles which have high energies (e.g. X-rays and gamma rays). The high energy particles can displace electrons from atoms, so that the material becomes ionized. Electromagnetic radiation of longer wavelengths (ultra-violet, light, infra-red and radio waves) does not have enough energy to cause ionization. So radio waves have been called non-ionizing radiation. Because of the confusion, perhaps we should stop using the word: radiation. Let's call it RF, or electromagnetic energy. Please assure your friends that electromagnetic energy at radio frequency is not going to hurt people like ionizing radiation which might escape from a nuclear reactor. Actually, they're going to get a little ionizing radiation from sitting too close to the family TV set, but there isn't any ionizing radiation coming out of an Amateur transmitting antenna. □

hr REPORT

Amateur club, military recreation, and RACES station license rules were approved by the FCC at its May 29 agenda meeting. As established back in March existing licenses of all three classes will continue in force and renewable, but no new licenses will be issued. Thursday's agreement simply approved the rule changes required by the earlier decision.

hr Report, May 30, 1980 □

Mass. QSO Party

by Nels Anderson, K1UR

A recent Ham Radio Horizons article discussed how many hams eventually get themselves into a comfortable rut in their operating activities and how enjoyable it can be when something different is finally tried. With this objective of doing something different a group of us decided to operate the May 1980 Massachusetts QSO Party not from the comfortable confines of a fixed station but mobile in the far western parts of the state. This would make possible an interesting operating environment and enable other QSO party participants to work the rare western counties.

The journey began the morning of Saturday May 17 in Worcester where a station wagon with camper and a pickup truck were outfitted for radio operation. Although this took a bit longer than planned, both vehicles were on the road shortly after the contest started at noon, with one or both equipped for operation on all bands from 80 meters through 220 MHz.

The first goal was Quabbin Reservoir in Hampshire county. By setting up a generator and the driven element from a tribander it was possible to operate a kilowatt on 20 through 10. This setup caused a few stares but also nice visits from the MDC police and two other hams who happened by.

After a few hours in the sun it was off to the far west, dipping briefly into Hampden county and after a dinner at the "Golden Arches" to the evenings destination: Brodie Mountain in Berkshire county. For night-time operation a 40 meter dipole was raised and with the kilowatt going many contacts were made up to about 2 am.

The morning brought rain (there's no escaping Murphy) but after a late start the trip continued to Mt. Graylock, still in Berkshire and the highest point in the state. Fortunately the summit of the mountain was marked, for the fog was so bad we would have gone right back down without knowing

it. Surprisingly there was little heard on two meters from the summit; probably there were not too many other hams up early on a miserable Sunday morning. HF was good though, even bringing in a few DX stations.

After a few hours in the fog and wind strong enough to rock the cars, it was time to start heading back home. Once off the mountain the weather improved allowing for a couple of hours



Dave Kent, N2AWG, operating HF from the truck, parked along Route 2 in Franklin county.

of operation at a rest stop along Route 2 in Franklin county. By the time we were done there it was late afternoon so we rode straight through to Wellesley with operation continuing along the way and including a return to Worcester county as well as Middlesex and Norfolk.

Was it worth it? Sure; in a couple of counties we were the only ones on the air and so helped out a lot of other entrants. It certainly was a different operating experience. Next year? Maybe a kilowatt station while in motion with the generator going....

Along for the ride were K1TK, N2AWG, WA1ZLQ, and K1UR. Also from WARS operating at home was N1ADY. □

Deadline for the next Spark Gap is August 15 (September issue).

OFFICERS

PRESIDENT:

David Curry, K1TK, 237-2450

VICE PRESIDENT:

Erik J. Thoresen, K10GF, 653-1216

CORRESPONDING SECRETARY:

Bill Hanlon, N1ADY, 384-8056

RECORDING SECRETARY:

Nels Anderson, K1UR, 323-5029

TREASURER:

Jim Hatherley, WA1TBY, 254-6042

OPERATING ACTIVITIES:

Glenn Brodie, N1ACN, 443-8677

FUND RAISING:

Kevin Kelly, WA1YHV, 242-0341

TRUSTEE:

Lud Fasolino, K1LF, 237-0316

REPEATER COMMITTEE:

David Curry, K1TK, 237-2450

Bill Downing, WA1PQY, 655-3040

Scott Nacey, WA1YOJ, 235-1599

Dick Paret, WA1ZLQ, 762-5074

The above is the list of new officers elected at the May 15th meeting. The new officers will officially take office on September 1, 1980.

ELECTRONICS EXCHANGE

For Sale: Realistic DX-160, General Coverage receiver. Covers 150 kHz to 30 MHz. Has AM, SSB, and CW on Ham bands and commercial short wave frequencies. In mint condition. Being sold because I purchased a Panasonic RF-4800. Ideal beginning Novice receiver and for SWling. Complete with owners manual, external communications speaker. Now at Radio Shack for \$179.95. Asking price \$100.00. Call Walt, K1YTY, at 237-9289.

For Sale: 12 volt power supply. Kepco model 12-100M. 12 v @ 100 amps regulated. Lab quality supply. Asking \$250 but will talk. Contact Gene Balinski, WA1UXA, 1 Oak Hill Lane, Apt. 112, Nashua, N.H. 03062.

For Sale: Heath SB-104A digital trans-

ceiver, 100 watts 80-10 meters. Comes with remote VFO and power supply. For further information, contact Al Muise, K1NZQ, 22 Riverview Avenue, Methuen, Mass.

For Sale: Standard SRC-146A handie-talkie, with touch-tone pad, desk charger, leather case, four antennas, twelve pairs of crystals. Best offer. Call Dick, WA1ZLQ, at 762-5074. □

hr REPORT

FCC Chairman Ferris met with ARRL President W2HD and General Manager W1RU in Washington June 19. The two League officials requested the meeting to review a number of matters concerning the Amateur fraternity, particularly with respect to current regulatory trends at the Commission.

hr Report, June 6, 1980 □

Hereabouts...

One final reminder of the picnic July 20 at the Auburndale Playground with the Middlesex club. Follow the map below to get there....

